

## Claims

1. A device for letting off residual steam and residual water from the heating unit (5) of a hot-beverage machine, in particular a coffee machine, said device comprising a residual fluid line (11) that is connected via an on-off valve (12) to the heating unit (5) for conducting fluids and which also leads to a collection container (16), in particular inside the hot-beverage machine, wherein a fresh water line (2) is connected to a fresh water intake (4) of the heating unit for supplying fresh water to the heating unit (5)  
**characterized in that**  
the device comprises a heat-exchanging and heat-storing capacitor (14) with a residual fluid line section (13), a fresh water line section (17) and a heat-storing medium that is connected heat-conducting to these line sections, that the residual fluid line section (13) is connected to the residual fluid line (11) and that the fresh water line section (17) is inserted into the fresh water line (2).
2. The device according to claim 1, characterized by a sequential control of respectively one fresh water supply for the heating unit (5) where a water pump (3) that is arranged in the fresh water line (2) is activated and pumps fresh water through the fresh water line section (17) to the heating unit (5), further comprising a pressure-control valve (6), installed together with the fresh water intake (4) of the heating unit (5) in a discharge line (5a) of the heating unit (5), which control valve opens up with the operating pressure of the water pump (3) and pumps, as

well as a respectively following cooling through steam expansion during which the water pump is shut down, the pressure-control valve is closed and the on-off valve (12) is opened, thus causing residual water and residual steam to flow through the residual fluid line section (13), and further characterized in that the heat exchanging and heat storing capacitor (14) is dimensioned in such a way that following several fresh water intakes – respectively interrupted by a steam-expansion processes – a thermal equilibrium of the heat-exchanging and heat-storing capacitor (14) adjusts, in which the residual steam in the residual fluid line section (13) is essentially condensed completely during each cooling through steam expansion process.

3. The device according to claim 1 or 2,

**characterized in that**

the residual fluid line (11) is branched off from the fresh water intake (4) of the heating unit (5) with the aid of an on-off valve (12).

4. The device according to claim 2,

**characterized in that**

the residual fluid line (11) is branched off in upstream direction of the pressure-control valve (6) from a discharge line of the heating unit (5) with the aid of an on-off valve (12).

5. The device according to one of the claims 2 - 4,  
**characterized in that**  
the on-off valve (12) and the water pump can be switched at the same time.
6. The device according to one of the preceding claims,  
**characterized in that**  
the on-off valve (12) is designed as magnetic valve.
7. The device according to one of the preceding claims,  
**characterized in that**  
the heat-exchanging and heat-storing capacitor (14) comprises a block of heat-conducting and heat-storing material in which the residual fluid line section (13) and the fresh water line section (17) are arranged.
8. The device according to claim 7,  
**characterized in that**  
the heat-storing block consists of aluminum and that the fresh water line section (17) is a chromium steel pipe, integrally cast into the block.
9. The device according to claim 7 or 8,  
**characterized in that**

the block is divided parallel to a plane that contains the residual fluid line section (13), such that the residual fluid line section (13) is exposed in one of the two parts, with the block parts being at a distance to each other.

10. The device according to one of the claims 7-9,  
**characterized in that**  
the residual fluid line section (13) and the fresh water line section (17) extend in two parallel planes, arranged one above the other, in the capacitor block.
11. The device according to one of the preceding claims,  
**characterized in that**  
the residual fluid line section (13) and the fresh water line section (17) are arranged parallel in the form of wavy or meandering line sections inside the capacitor block (14).
12. The device according to one of the preceding claims,  
**characterized in that**  
the heating unit (5) is a flow-through heating unit.